Introduction

For most of American history, sidewalks were considered an essential part of our communities. The unpaved, muddy, vehicular middle part of the street was no place for the pedestrian. Clean, dry walks along the side of the street provided a suitable, safe place for the pedestrian. Residential areas huddled close to places of work and shopping because, for most people, walking was the predominant form of getting around. Even with the coming of inter-city rail and later, intra-city streetcars, walking remained the primary way of reaching your final destination at either end of the ride. While electric trolleys opened up "street car suburbs", most homes continued to cluster within a few short blocks of the trolley stop. Sidewalks provided the means of walking from home to the streetcar. Thus, prior to the advent of the automobile, cities were generally compact in form and catered to the needs of the pedestrian.

As our cities have become more automobile dependent, sidewalks have gradually disappeared from most new suburban developments. In Salisbury, for example, the first phase, pre-war section of Milford Hills has sidewalks, while the second phase, developed after the war, does not. Unfortunately, this lack of interest in sidewalks continued for many years in most new developments in Salisbury.

Several factors have played into this phasing out of the sidewalk. First, as residential areas have become more isolated from shopping areas, parks, schools, and work places, we have grown to rely upon the automobile to get just about anywhere. In practical terms, where it once made sense to walk a three or four blocks (about a quarter of a mile) to a nearby school, corner store or public park, these services are today often several miles away. Second, large lot zoning has increased lot widths in many new neighborhoods to the point that installation of a sidewalk has become relatively expensive. Consider, for example, the cost per housing unit of providing sidewalks for three 50-foot wide lots or one 150-foot wide lot. Third, today's new developments often lack interest to encourage pedestrian activity. Homes are set back from the street great distances and lack functional front porches. Street trees are not provided for shade, and streetlights are few and far between.

As streets have become less attractive for multiple functions, many citizens have begun to expect that the only purpose for streets, the largest portion of a city's public realm, is to move motor vehicles. In turn, the ideal function of the sidewalk has shifted to recreation and relegated to greenways and parks. Streets will always serve a fundamental purpose of moving vehicles, but they are capable of much more. Salisbury is beginning to recognize the demand of its streets. By building a multi-modal transportation infrastructure that serves not only motorists, but also pedestrians and bicycles, Salisbury is committing to transportation choice, greater mobility, safer streets, cleaner air, less congestion, and healthier citizens.

Planning Context

The Salisbury Vision 2020 Plan marks the second major phase of a community planning process started in the late 1980s, known as the Salisbury 2000 Strategic Growth Plan. Salisbury 2020 is intended to continue the type of successful community planning that the original Salisbury 2000 Plan began, while bringing some of the most current and effective approaches to growth management into the body of the policies.

The 2020 Plan recognizes two elements supported by this prioritization plan: 1) the importance of and need for multi-modal transportation resources, and 2) the interrelatedness of improved health, safer streets, and safer neighborhoods by bringing citizens into that most prevalent of public realms.

The 2020 Plan establishes five policies for the implementation of sidewalks into the city's existing and planned infrastructure:

1. ***Policy SW-1****: Where no sidewalks are present in existing developed areas, sidewalks shall be provided on a priority basis to connect residential areas to major pedestrian destinations.*
2. ***Policy SW-2****: In newly developing areas, sidewalks shall be required as an integral part of the community's basic infrastructure.*
3. ***Policy SW-3****: Sidewalk width shall be determined according to anticipated pedestrian traffic volumes. Except where constrained by unusual physical limitations, a minimum sidewalk width of five feet shall be required.*
4. ***Policy SW-4****: Except where constrained by physical limitations or other obvious reasons, sidewalks shall be required on both sides of the street.*
5. ***Policy SW-5****: Marked crosswalks shall be considered at all locations where significant pedestrian activity occurs now or is to be encouraged.*

Multi-Modal = Increased Mobility

Cars and transit are important elements of Salisbury's transportation system. These modes are regional in scope and well-suited to long and middle-distance trips. In contrast, walking and bicycling are local and neighborhood-oriented in scope, and are well-suited to shorter distance trips. A balanced transportation system provides for all modes, allowing travelers to choose the most convenient mode for a given trip. For many travelers, driving is not even an option. In fact, one-third of people in the United States do not drive.

Sidewalks can actually enhance safety for motorists because adding sidewalks to a street effectively separates pedestrians and vehicles. Roadway plans should integrate well-designed multi-modal facilities so that safety is increased for all roadway users. Good design will encourage potential pedestrians to use the public right-of-way. Wide sidewalks that are buffered from moving vehicles, as supported by policy SW-3, provide clear guidance and decrease the likelihood of vehicle-pedestrian conflict.

Well-marked, short crosswalks – as supported by policy SW-5, reduce the amount of time that pedestrians are in potential conflict with motor vehicles at an intersection. Also, for crashes, there is a direct relationship between vehicular speed and the severity of pedestrian injuries. The probability of a pedestrian dying from a crash with a motor vehicle is 3.5% at 15 mph, 37% at 31 mph, and 83% at 44 mph.

Economic Development

By making neighborhoods safer and more livable, well-designed multi-modal facilities can actually raise property values and marketability. A 1998 report by the Real Estate Research Corporation determined that, over the next 25 years, real estate values will rise the fastest in communities that incorporate mixed-use districts and "pedestrian-friendly" configurations.

Improved Health

For years, organizations such as the American Lung Association and the Center for Disease Control (CDC) have promoted the health benefits of regular physical activity. Just a few minutes of exercise a day can reduce the risk of coronary disease, high blood pressure, diabetes, colon cancer, and depression. However, Americans are more sedentary today than ever before. Recent studies from the CDC have found that 73% of American adults are not as active as they need to be, while 36% of young people are not vigorously active on a regular basis. The CDC reports in the *Journal of the American Medical Association* that the United States has the highest obesity rate of any industrialized nation.

The CDC points to the automation of the workplace and home, and the fact that the automobile has become the principal mode of transportation for all trips, not simply the middle to long distances. Public health officials nationwide are beginning to look at the role that design of our cities plays into making physical activity nearly obsolete. In fact, Lawrence Frank, PhD., and Peter Engelke, of the Georgia Institute of Technology's City & Regional Planning Program of the College of Architecture, completed a 147-page study for the CDC entitled 'How Land Use and Transportation Systems Impact Public Health: *A Literature Review of the Relationship Between Physical Activity and Built Form*.' Rather than being integrated into daily activities, many find that physical activity now requires a scheduled and disciplined effort.

To help combat this growing crisis, the CDC and many state health organizations are developing policies and programs aimed at reinvigorating public activity. For example, the CDC's Active Community Environment's Initiative (ACES) promotes walking, bicycling, and the development of accessible recreational facilities, and was developed in response to data from a variety of disciplines, including public health, urban design, and transportation planning. One of the current activities promoting the goals of ACES includes the KidsWalk-to-School Program – a program designed to promote walking and bicycling to school.

Purpose of the Plan

The purpose of the Salisbury Sidewalk Prioritization Plan is to provide policy guidance to the Salisbury Planning Board and Salisbury City Council regarding new and infill sidewalk construction within priority areas over a 5-year period – much as the Capital Improvement Plan forecasts major improvements in 5-year increments. This plan will provide direction when sidewalk construction is requested to be varied in any manner, will assist in channeling allocated state and federal resources, and will facilitate prioritization of infill segments and maintenance by the Streets Division.

Part and parcel with the implementation of this plan, the Planning Board committee tasked with tackling this effort reached an important decision that regular review of the Transportation Improvement Plan (TIP) by the Planning Board's Transportation Committee must resume. With the City receiving a 2006 NCDOT grant for development of a Comprehensive Bicycle

Plan, with this Sidewalk Prioritization Plan, and with the 2020 Plan's goal for multi-modal infrastructure improvements, the importance of the TIP and Transportation Committee become more apparent. In addition to the 5-year review timeframe, the committee recommends annual progress reports to ensure that the prioritization areas, or "hot spots", remain accurate.

In order to facilitate and expedite development of this plan, and to ensure that future decision-makers understand the original intent, the committee adopted the following *Mission Statement*:

"Recognizing the need for a well-maintained unified sidewalk and greenway network, the Sidewalk Prioritization Plan establishes 5-year priority areas for sidewalk construction within the City's zoning jurisdiction."

In summary, the committee recommends a plan that desegregates the recreation and traditional functions of the sidewalk and prioritizes their location based on usefulness and need. This plan addresses sidewalks within the both corporate limits and the extraterritorial jurisdiction (ETJ).

What the Plan is Not

The Sidewalk Prioritization Plan is not an existing conditions survey. This clarification is very important for several reasons. Based on staff experience with other sidewalk plans and research conducted, a number of other municipalities are struggling with confused and frustrated citizens and decision-makers. A sidewalk prioritization plan developed within a planning context and used for planning and funding purposes does not inventory the existing sidewalk network or its physical condition. In addition, it does not track maintenance of the existing and planned network. However, this plan can, and may, be used by the Streets Division in determining those high-priority areas, or "hot spots", for construction of infill segments and maintenance of high usage areas.

The Sidewalk Priority Index – The Heart of the Plan

One of the objectives of this plan is to provide an objective method for prioritizing sidewalks that will maximize benefits to pedestrians.

The Sidewalk Priority Index (SPI) is intended to ensure that sidewalks are first constructed or repaired where existing need is the greatest and where the potential for pedestrian traffic is the greatest. In general, pedestrian activity is directly attributable to factors such as proximity to major destinations, specific zoning districts, and transit routes. The greater the intensity of these factors, the higher the potential for walking, and the greater the need for pedestrian facilities.

By overlapping a series of maps, each representing one of several characteristics, one can easily visualize the concentration of resources in a particular area. If each characteristic is assigned a number value based on its importance or potential for a given condition, then the cumulative intensity of all characteristics at a specific location can be determined. The SPI effectively adapts this methodology by identifying the specific characteristics that most affect the potential for walking.

In order to develop an accurate representation of the community's values regarding sidewalks, the committee assigned weighted values to the identified characteristics. The values were based on each characteristic's potential to generate or impact pedestrian traffic.

SPI Characteristics & Values

District Factors

Rural A-1 District
In order to preserve the rural or undeveloped character of areas within this district, this characteristic has been assigned a value of minus 8. For situations in which the sum of other SPI factors warrants a sidewalk in one of these districts, a rural sidepath may be the most appropriate approach.

Low-Density R-20 District
Due to low density, a predominance of single uses and non-grid roads, this district has relatively low potential for transportation walking and has been assigned a value of minus 4.

Downtown B-5 District
Based on the highest level of commercial and office intensity with great potential for high density housing in the same area, for the greatest mixing of uses, and for the grid street network, this district creates the highest potential for transportation and recreational walking. Accordingly, this district is assigned a value of 16.

Commercial Nodes (1/4-mi. radius)
Based on a 1/4-mile radius of higher commercial intensity, potential for higher density housing and mixing of uses generally located in pods at significant intersections throughout the city, this district is assigned a value of 12.

East Innes Gateway Overlay
Based on the spirit and intent of this separate overlay ordinance, the importance of the pedestrian and appropriately-scaled development assigns a value of 4 to this district.

High-Density Overlay
Due to the obvious propensity for higher than average density and generally associated with multi-family development, and although not necessarily associated with traditional grid streets, this district has a relatively high potential for transportation walking. Accordingly, this district has been assigned a value of 8.

Historic Overlay
Based on the traditional grid street network, traditional medium density platting, and the proximity of these district overlays to neighborhood service and support, this characteristic is assigned a value of 12.

Trip Generation Factors at ¼ - mile Radius

Colleges and Schools
Elementary, middle, and high schools can generate many daily walking trips by students, whose ages typically make them among the most vulnerable pedestrians.

- Elementary: Areas within a ¼-mile of elementary schools have been assigned a value of 12.
- Middle: Areas within a ¼-mile of middle schools have been assigned a value of 12.
- High: Areas within a ¼-mile of high schools have been assigned a value of 12. Note that the value does not drop below that of high-density or a grocery store.
- Colleges: Areas within a ¼-mile of colleges generate heavy pedestrian activity. Factors contributing to this activity include a young population, businesses that cater to students, and the fact that many students do not own automobiles. In addition, students, faculty, and staff often live nearby. This is very much the case for two of our local colleges. Accordingly, areas within a ¼-mile of colleges have been assigned a value of 16.

Medical Facilities
Hospitals and smaller medical facilities in Salisbury are large employment centers, and two of which are located adjacent to well-established neighborhoods and transit facilities. This characteristic generates a considerable amount of pedestrian activity and transit use. Accordingly, areas within a ¼-mile of these facilities have been assigned a value of 4.

Parks & Greenway
Greenways and parks attract recreational users of all ages. Greenways, specifically, are part of the pedestrian infrastructure itself and are used for transportation purposes. Additionally, Salisbury is unique in that all parks in the system, except for the Community Park, are accessible by foot and are all adjacent to an existing neighborhood. Accordingly, areas within a ¼-mile of the greenway and parks have been assigned a value of 12.

Transit Routes
Almost all bus users begin and end their trips as pedestrians. Accordingly, safe and continuous pedestrian facilities are an integral component of a public transit system. Areas within a ¼-mile of a transit route have been assigned a value of 12.

Civic Facilities
Because Salisbury's civic buildings provide services to a wide range of users, including children, senior adults, and disabled people, areas within a ¼-mile of these facilities have been assigned a value of 4.

Groceries & Health Clubs
Due to the current lack of regional commercial development in Salisbury, the majority of all grocery stores are still within the heaviest commercial nodes and adjacent to existing neighborhoods. Our large-scale grocery stores still have the advantage of serving the public in a manner similar to small-scale convenience. Regarding health clubs, Salisbury recognizes the importance of healthful living and becoming a more active community. Accordingly, areas within a ¼-mile of groceries and health clubs have been assigned a value of 12.

Other Factors

Major & Minor Thoroughfares
Thoroughfares are the most significant through-streets in a roadway system and provide direct access to many destinations. In addition, the speed and volume of motor vehicle traffic intensifies pedestrians need for separate facilities. Accordingly, proposed sidewalks on Major Thoroughfares have been assigned a value of 4.

Missing Segments
Missing sidewalk segments within a scoring roadway segment have been assigned a value of 4. This factor recognizes that completing a sidewalk network and providing continuity of facilities generally has greater value to pedestrians.

Using the SPI

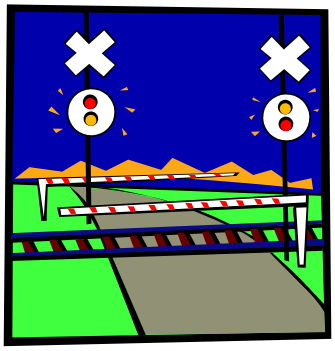
Using the quantitative overlay concept, the SPI characteristics are layered to derive a composite score for a particular geographic area or street. The areas or streets with the greatest concentrations of pedestrian characteristics receive the highest scores, and therefore should have the highest priorities for sidewalk installation or maintenance.

The user of this plan will find at the bottom of the calculation form a note that scoring is determined along roadway segments – regardless of development or parcel size. This prevents individual major pedestrian-generating projects from coincidentally falling outside of many of the scoring characteristics and avoiding installation. In addition, it ensures continuity of the sidewalk network between "significant"

intersections, railroad crossings, or other important features.

The segment boundaries employed to determine the SPI score that are first encountered, in any combination, shall be as follows:

- 2-way Stop Intersections
- 4-Way Stop Intersections
- Signalized Intersections
- Railroad Crossing
- Or a distance of approximately ½-mile to the nearest intersection, crossing, or environmental feature if none of the above occur earlier



The SPI provides an objective methodology for selecting and prioritizing sidewalk installation and maintenance. The process offers clear guidance on where the presence of sidewalks will provide the greatest public benefit. However, professional judgment will still be necessary in some cases. For example, it will be necessary to establish priorities among projects with the same – or very similar – scores. In addition, some projects will require the evaluation of unique factors, such as pending development projects or site conditions that may need to be taken into consideration.